

**Dear CEO**

**SAMA review of Actuarial Submissions for Year 2020**

The year 2020 was the first year when insurance companies submitted actuarial reports under the new Actuarial Work Rules, issued in March 2020. The primary objective of those Rules is to enhance the role and responsibilities of actuaries in the insurance sector in order to facilitate informed decision-making by management and to provide greater technical support to the business as the market sophistication continues to grow in the Kingdom.

This Document encompasses SAMA's observations from its review of the following actuarial reports submitted under the new Rules:

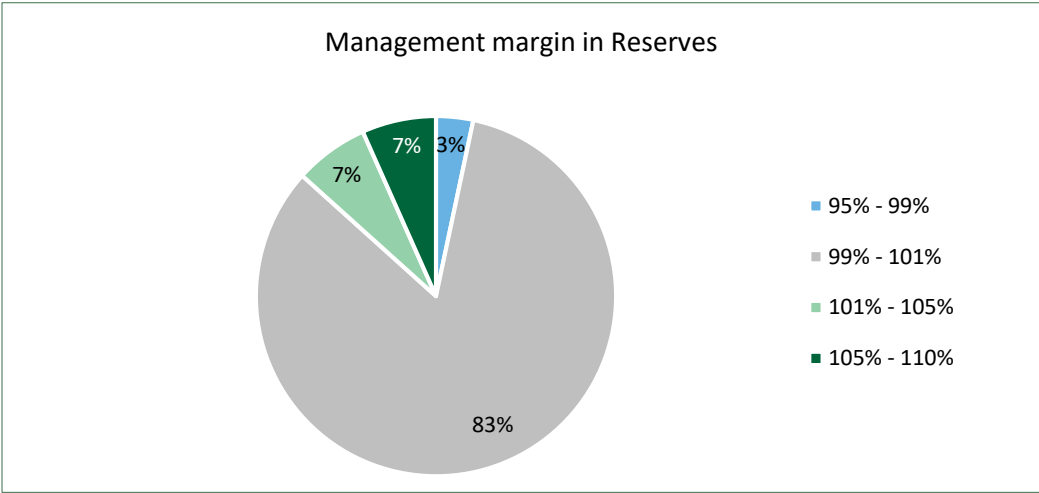
- A. Actuarial Reserves report at year-end 2020 (pages 1 – 8), including
  - Link with Pricing Adequacy reports for Motor and Medical
  - Impact of COVID 19 and regulatory response to it
- B. Reinsurance Appropriateness and Adequacy report 2020 (pages 8 – 11)
- C. Solvency and Capital report 2020 (pages 11 – 14)
- D. Persistency report 2020 (page 15)
- E. Investment and Asset Liability Management report 2020 (pages 15 – 16)

A number of important observations emerged from the above reviews performed by SAMA. SAMA would like to share those observations with the Company's management and its expectations in respect of those observations, in anticipation that management will consider each of those observations and recommendations diligently, internal discussions will be held at the Board of Directors' level and with all relevant functions, and appropriate actions will be taken.

**A. Actuarial Reserves at year-end 2020**

**1. Booked Reserves vs Actuarial Recommendation**

The actuarial reserves recommended by the Appointed Actuary are on a 'best estimate' basis. It is possible for the actual results to deviate, possibly materially, from the Actuary's recommendations. In its instructions for reserving, SAMA stipulated that it expected management to book reserves equal to or, in order to get more comfort, higher than those recommended by the Appointed Actuary. To facilitate management in its decision-making, SAMA requires the Appointed Actuary to produce an estimate of the variability around the best estimate of reserves. The graph below shows the distribution of booked reserves relative to those recommended by the Appointed Actuary.

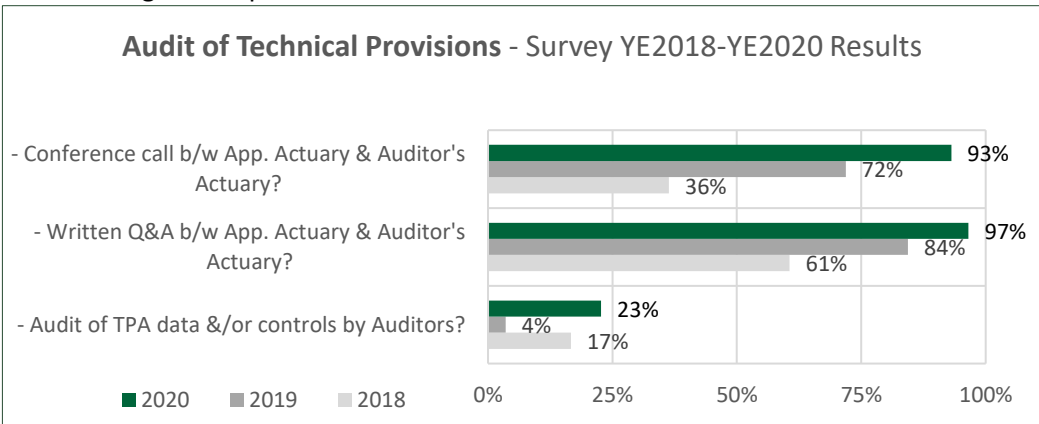


Around 14% of insurance companies booked reserves higher than those recommended by the Appointed Actuary, whereas only 3% booked lower than recommended reserves. It must be noted that, under IFRS 17, there will be less discretion in this area as insurance companies will be required to add a loading for variability (viz., risk adjustment) to the discounted best estimate of claims liabilities.

*SAMA expects management to enhance its understanding of the variability around the best estimate of reserves and decide on the management margin in reserves from an informed position and with due regard to the risk appetite of the Company. SAMA also expects management to develop knowledge and understanding of the link between the management margin under IFRS 4 and the risk adjustment required under IFRS 17.*

## 2. Role of the External Auditors

The external auditors play an important role in providing assurance to the Audit Committee on the reserves estimated by the Appointed Actuary. In previous years, we had identified areas that required attention from the Audit Committee in order to have an effective and technically sound input from the external auditors, which could also meet the professional audit standards. Every year, we have carried out a survey of the interaction between the external auditors and the Appointed Actuary as an indicator of the quality of the external auditors' work. The graph below shows the results of this survey in those areas where we had observed shortcomings in the past.

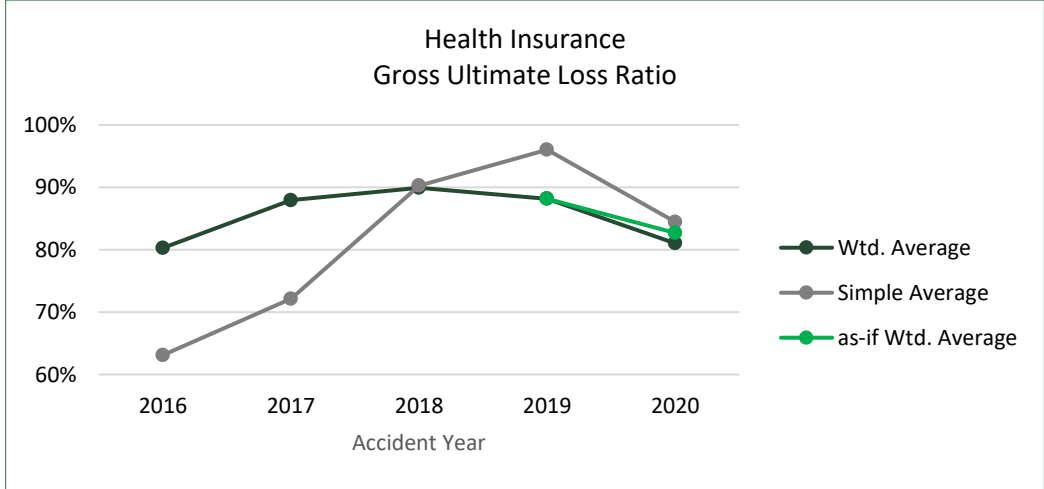


After starting from a low base, interaction between the Appointed Actuary and the external auditor’s actuary has continued to improve year on year, though there is still a small minority of insurance companies where this important audit step was not performed. On the other hand, we note very limited progress in respect of the audit of third part claims administrators (TPA) for Health insurance. We take note of this gap in audit procedures and, based on the past experience of insurance companies, we are afraid that insurance companies may be exposing their financial statements to a significant risk.

*SAMA expects each Audit Committee to ensure that the scope of external audit requires adequate input from the external auditor’s actuary, the external auditor’s actuary possesses appropriate professional qualification and skill and is fully aware of the latest trends in the Saudi insurance sector. Where the Company uses the services of a TPA, the Audit Committee shall also satisfy itself that the audit scope appropriately covers the activities of the TPA, as applicable under the International Auditing Standards. SAMA expects the Audit Committee to monitor and ensure adherence by the external auditors to the above scope items.*

3. Trends in Health Insurance

The loss ratio of SME segment had risen steadily in the two years prior to the year 2020, possibly attributable to increasing awareness as well as stiff competition driven by the historically low loss ratios experienced by this segment. The graph below compares the ‘simple average’ loss ratio for Health insurance aggregated for all companies with the corresponding ‘weighted average’ loss ratio, using premiums as the weights and loss ratios as projected by the Appointed Actuary.



With the government stepping in to bear the treatment cost of COVID19 patients and the general tendency to avoid use of health care services in optional or less serious circumstances as the pandemic was spreading, year 2020 experienced a large reduction in loss ratio compared to last year, with a more steep reduction observed in ‘simple average’ loss ratio.

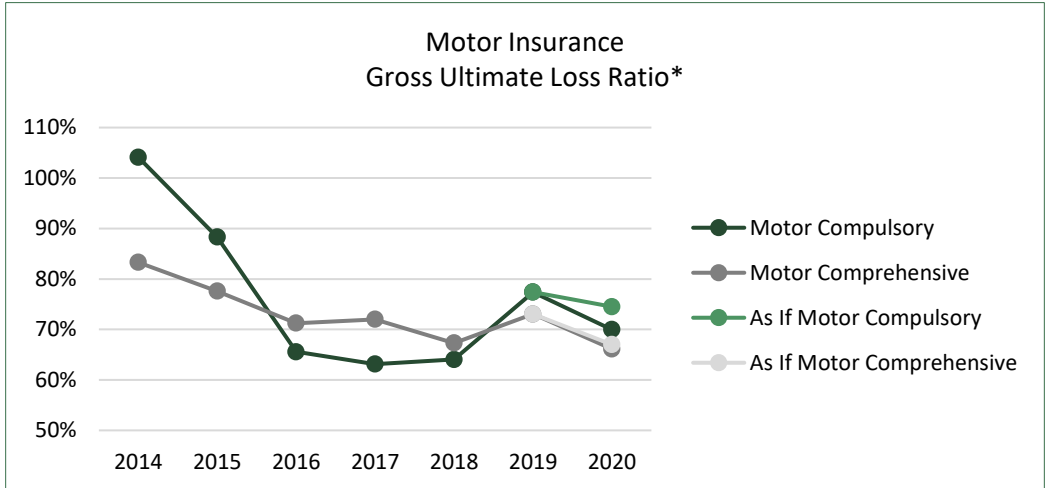
Meanwhile, in view of the deferral of elective treatments, SAMA issued instructions in Q2 2020 requiring all insurance companies to make appropriate provisions for those deferred claims, and hence avoid declaring profits prematurely. Large provisions were made as a result, which were used to offset the increased claims frequency observed in the subsequent quarters. Adding the allowance remaining at year-end 2020 would increase the ‘weighted average’ loss

ratio by a few percentage points, as shown in the above graph under ‘as if weighted’ average loss ratio, thus adding a few hundreds of millions to the strength of claims reserves held at year-end 2020.

*SAMA expects management to closely monitor the policyholder behavior in response to the pandemic, understand the reasons for differences in the extent of COVID19 impact on loss ratios for large corporate policies and SME policies, ensure future pricing is not distorted by the low loss ratios experienced in 2020, and adequate claims provision is maintained for deferred treatments.*

4. Trends in Motor Insurance

The graph below shows the claims experience under Motor insurance, separately for Motor Compulsory and Motor Comprehensive, over the last few years.



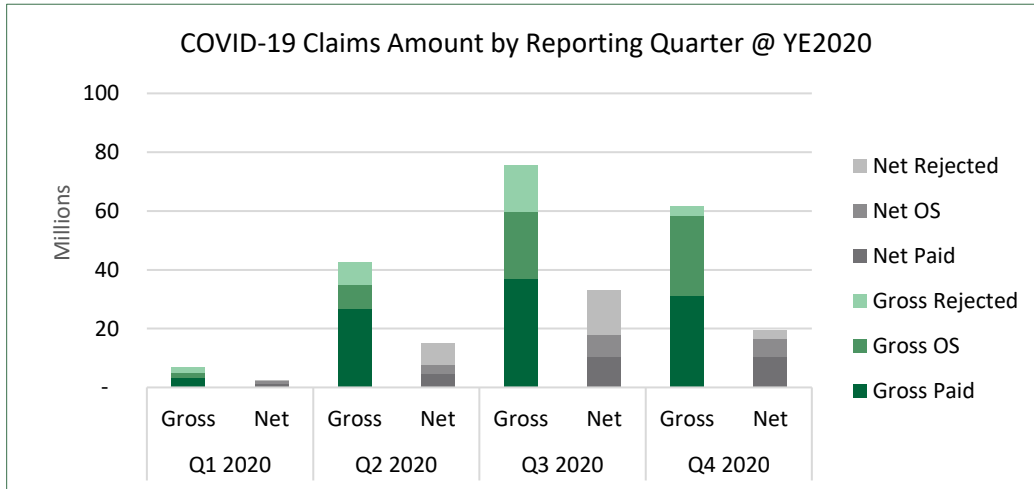
\*Weighted average of all companies, net of salvage and subrogation

The lock-down in Q2 2020, and since then online schooling and part-remote working significantly reduced the number of accidents on the roads, materially reducing the loss ratios for both compulsory and comprehensive motor lines. In the spirit of fair treatment of policyholders, all motor insurers announced a two-month extension in the policy term, free of charge, for all individual policyholders. SAMA issued instructions in Q2 2020 for adequate reserves to be provided for the said extension. The ‘as-if loss ratio’ in the above graphs shows the impact of including the provision at year-end 2020 for unexpired policies that will benefit from this extension in 2021. It can be seen that the impact is more pronounced for motor compulsory than for motor comprehensive policyholder, due to more individuals buying less expensive motor compulsory policies than motor comprehensive policies.

*SAMA expects management to ensure close monitoring of the evolving circumstances due to COVID 19 and responding in a swift and measured manner by adjusting the motor premium rates appropriately. SAMA also expects management to ensure adequate provisions are held for the two-month free cover granted until the expiry of the last policy benefitting from that extension.*

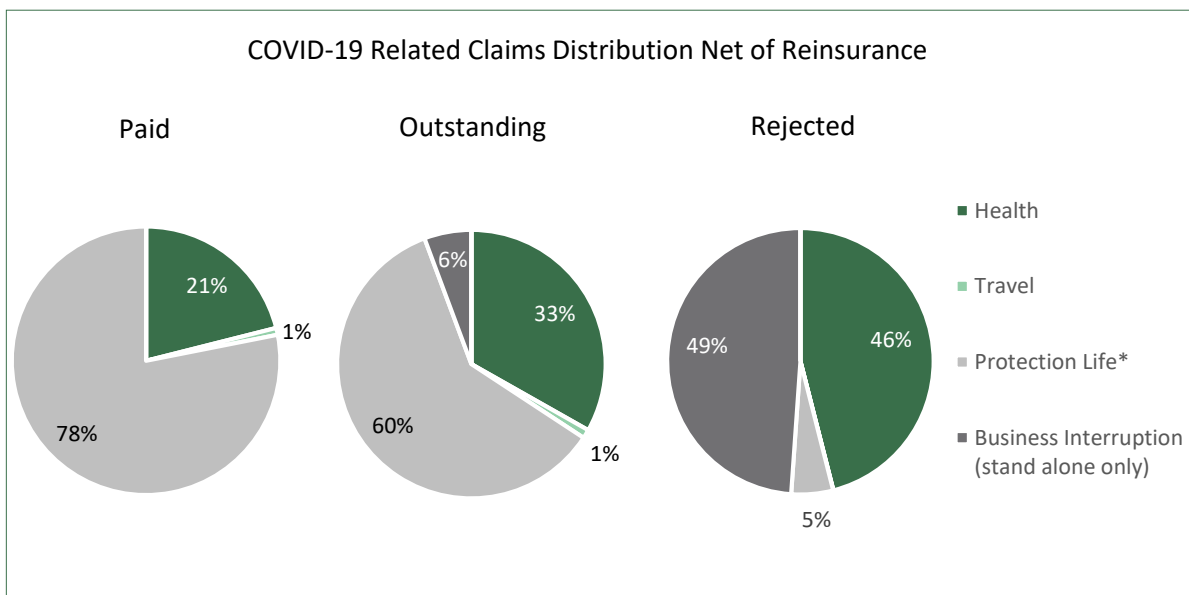
## 5. COVID-19 Related Claims

Since the early days of the pandemic, SAMA established additional reporting requirements for insurance companies so that claims emerging due to COVID 19, directly or indirectly, can be monitored and measure can be taken, if necessary. The graph below shows the status of reported claim amounts at year-end 2020 by reporting quarter.



The gross reported claims increased significantly in Q3 2020 compared to the previous quarter, but it came down in the next quarter. A small proportion of claims have been rejected, whereas a significant proportion of claims are still outstanding. The expected reinsurance recoveries reduced the net reported claims to only 37% of the gross reported claims. Therefore, the overall net impact appears to be limited so far.

The graphs below show the distribution of settled, outstanding and rejected claims by line of business, all on a net of reinsurance basis.



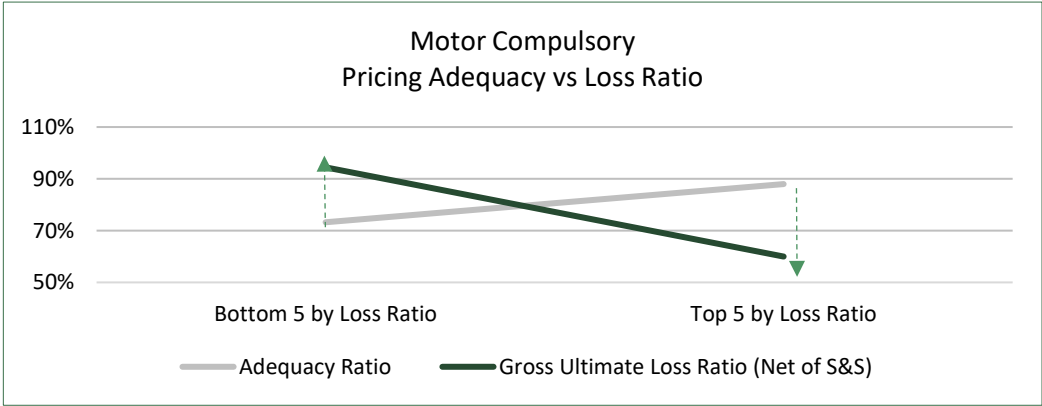
The majority of settled claims as well as outstanding claims relate to Life insurance, covering deaths attributed to COVID 19, followed by Health insurance claims. The majority of rejected claims relate to Business Interruption, followed by Health insurance claims.

*While the impact of COVID 19 related claims has so far been minimal for the Saudi insurance sector, SAMA expects management to continue to monitor the emerging experience. Also, since significant recoveries are expected from the reinsurers, SAMA expects management to ensure there are no gaps between the original policy terms and reinsurance treaties in respect of the pandemic-related claims under each affected line of business.*

**6. Motor Loss Ratio vs Pricing Adequacy**

For Motor and Health classes, subject to meeting a number of conditions, SAMA rules give flexibility to the Underwriting function of an insurance company to sell an insurance policy at a price different from that recommended by its Appointed Actuary. Among others, these conditions require that any variations from the technical price must be within the authorization framework approved by the Company’s Board of Directors, rationale for any discounts given should be appropriately documented, and the Board should be made aware of the potential financial impact of those discounts. Everything else being equal, a low price adequacy can be expected to produce a high loss ratio and low profitability.

The graph below compares the pricing adequacy ratio against the gross ultimate loss ratio for accident year 2020 between companies with the highest loss ratios and those with the lowest loss ratios.



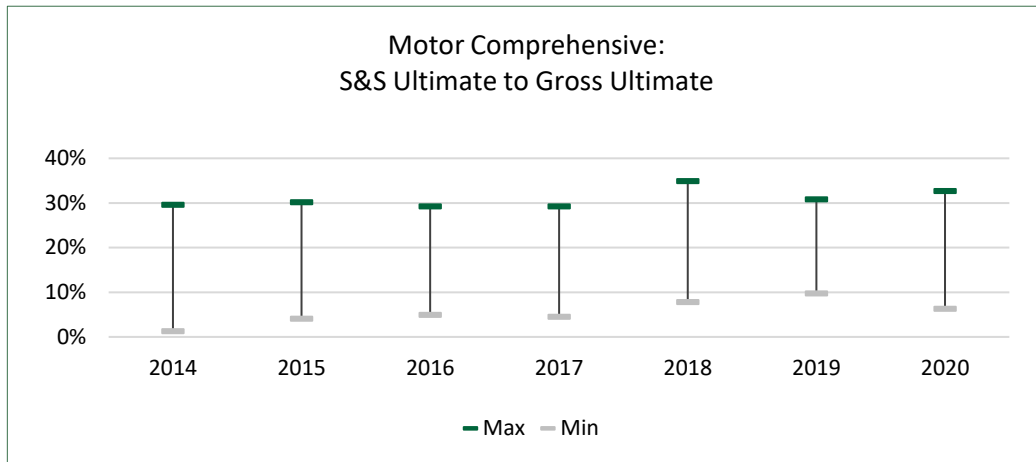
Note: Loss ratio is weighted average gross ultimate loss ratio of top 5 companies for accident year 2020. Pricing adequacy ratio is taken as the average of 2019H2 and 2020H1 ratios to correspond to accident year 2020.

It is clear from the above that the best performing companies in the Motor sector had significantly better pricing adequacy ratio than those that experienced the worst loss ratios. It is also important to note that those with the best loss ratios have price adequacy ratios still below 100%, thus highlighting the importance of sound underwriting judgement and effective claims management.

*SAMA expects management to ensure a) strict adherence to the internal controls around the discretionary reduction in premium rates, b) timely sharing of information with the Board of Directors as regards the expected financial impact of any material pricing discounts, and c) maintaining a strong feedback loop between the Underwriting function and the Appointed Actuary for maintaining the relevance and accuracy of the technical prices calculated by the Appointed Actuary.*

## 7. Salvage & Subrogation (S&S) Estimates

Effective management of salvage and subrogation recoveries can help a Motor insurer in reducing, possibly substantially, the net cost of claims. The graph below shows the range of the projected ultimate recoveries by insurance companies for the recent accident years.



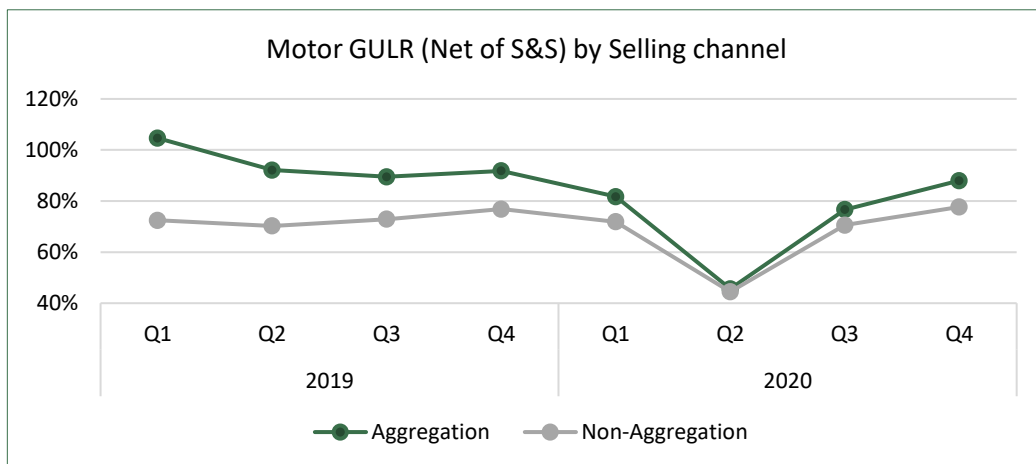
The wide range seen above implies that while some companies are able to improve their net claims experience by efficiently realizing the potential of salvage and subrogation recoveries, there are companies at the lower end of the spectrum with significant untapped potential, which in turn can severely affect their competitive position in the sector.

*SAMA expects management to continue enhancing the efficiency of its internal recovery process to maximize the benefit of this potentially sizable revenue source.*

## 8. Actuarial reserving - areas for improvement

### 8.1 Reserve segmentation for Motor insurance by Sales Channel

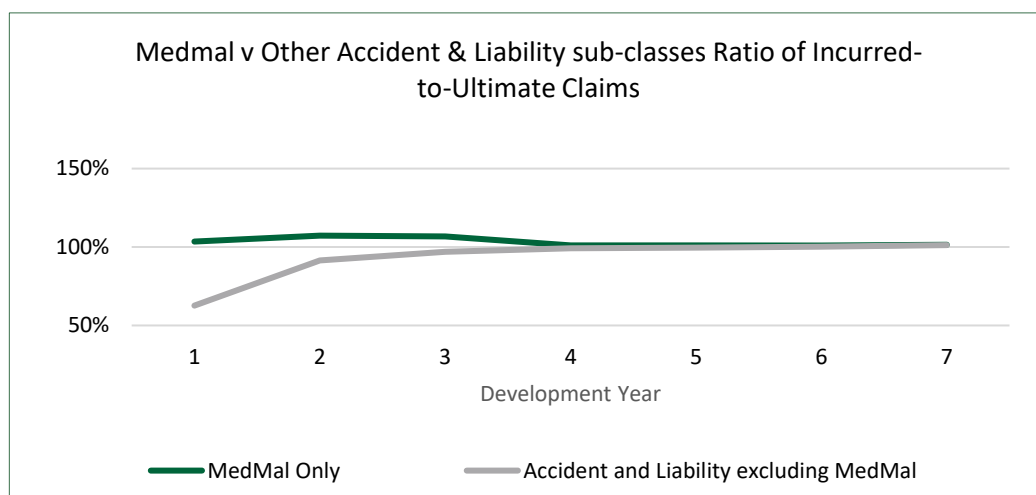
The graph below shows the loss ratio differences between policies sold via aggregator channel and those sold through other channels.



After the introduction of aggregator channel in 2018, large differences in loss ratios were seen initially. However, those differences have reduced considerably over time, partly due to improvements in the pricing adequacy ratio for this channel. The difference is still significant, requiring careful consideration in pricing, underwriting and claims management for policies written through the Aggregator channel.

## 8.2 Reserving for Medical Malpractice Policies

In a recent study carried out by SAMA, where data on medical malpractice policies was obtained from insurance companies, it was observed that the majority of medical malpractice policies issued in Saudi Arabia have a multi-year term, usually three to five years. It was also noticed that, while the majority of policies are issued on a claims-made basis, some companies also reported writing these policies on a claims-occurring basis, a feature that can have a significant impact on the claims tail. The graph below shows the development pattern for incurred claims in respect of those insurance companies that reserve for this sub-line separately from other Accident & Liability sub-lines.



It can be observed that the initial case reserves for medical malpractice policies tend to be more than what is eventually required for claims payment. This is partly attributable to very high rejection ratios as observed in our above study. SAMA is currently looking into the causes of this high claims rejection ratio and it will work with the insurance sector and other government bodies in order to address this issue. It will be important for each Appointed Actuary to be aware of potential future changes in this regard so that any impact on the reserves can be estimated adequately and on a timely basis.

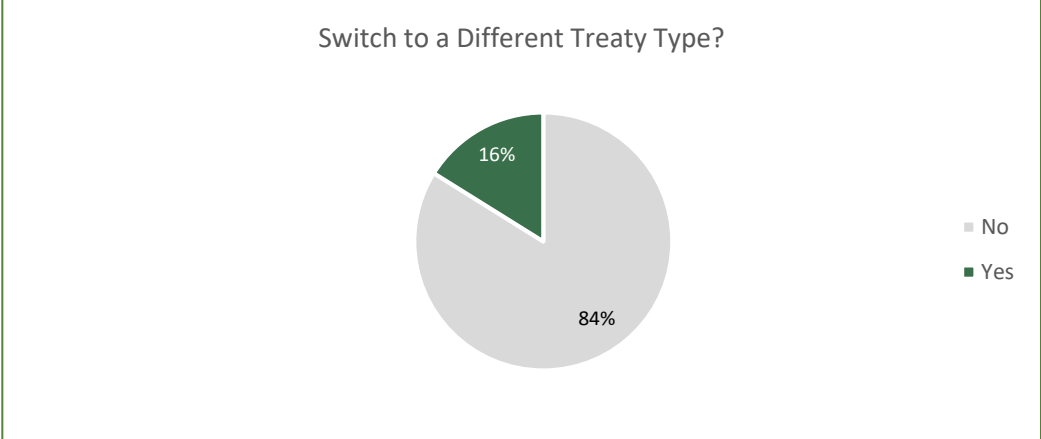
### B. Reinsurance Appropriateness and Adequacy report

For Property & Casualty insurance, majority of Saudi insurers rely heavily on reinsurance companies and a large proportion of business is ceded to them. It is therefore important that each insurance company assesses its reinsurance requirements using sound technical basis, and with due regard to its risk appetite.

The Actuarial Work Rules 2020 require an annual report from the Appointed Actuary, assessing the appropriateness of the Company's reinsurance arrangements and risk retention levels for each line of business. The Appointed Actuary is also required to make recommendations for reinsurance optimization to senior management and the Board of Directors. The task requires application of sophisticated actuarial modelling techniques and is commensurate with SAMA's objective to raise the standards of actuarial practice in the Kingdom. The reports were submitted to SAMA in Q4 2020.

*Changes Recommended for Treaty Type*

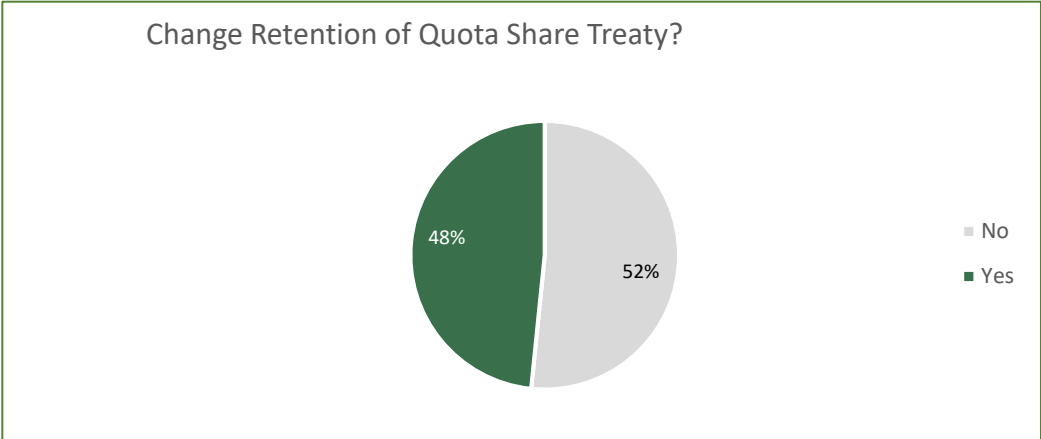
The graph below shows the proportion of insurance companies for which the Appointed Actuary found the current treaty type (i.e., quota share, surplus, excess of loss, etc.) to be inappropriate for the Company’s business and, hence, recommended another type of treaty.



While the proportion of insurance companies where it was recommended to switch to a different treaty type is small, given the significance of the proposed change, the recommendation requires immediate attention of senior management and the Board of Directors.

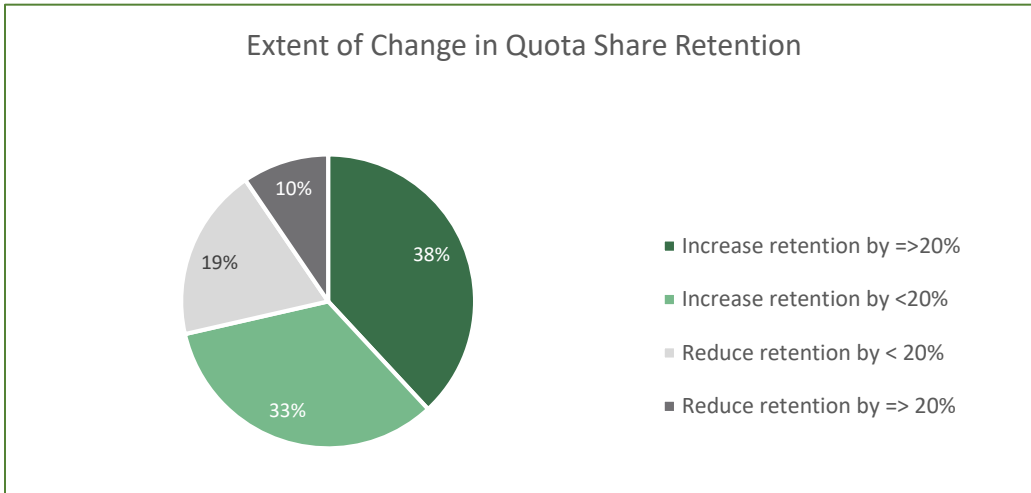
*Changes Recommended for Quota Share Treaties*

In addition to the above, there were a number of insurance companies for which, although the current treaty type was deemed appropriate by the Appointed Actuary, the risk retention level under that treaty was deemed inappropriate. The graph below shows the results of this assessment for quota share treaties of all insurance companies.



Nearly half of all quota share treaties were deemed to have sub-optimal retention levels.

The graph below shows the range of improvements recommended by the appointed actuaries in respect of those quota share treaties.



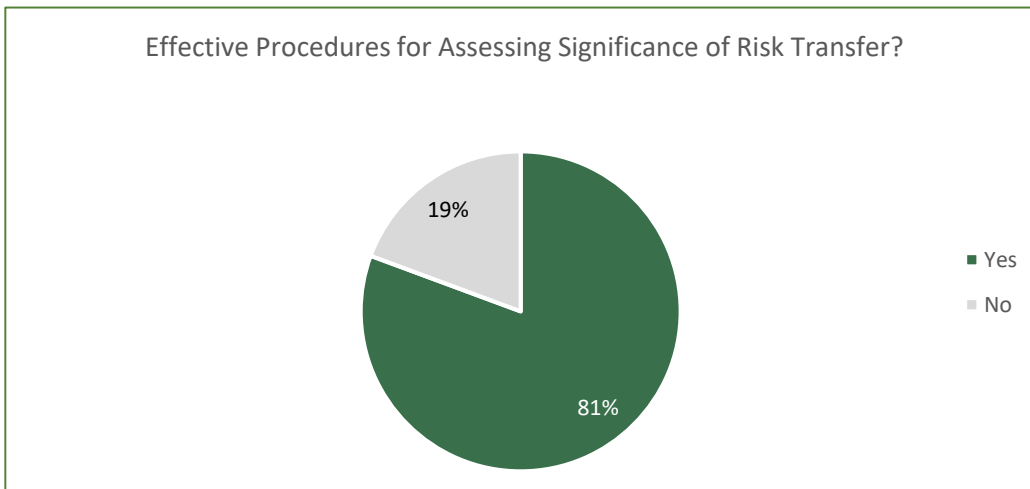
More than one-third of the above recommendations implied increasing the retention by at least 20 percentage points. While a large majority of recommendations was for an increase in treaty retention, close to one-third also recommended a reduction in the retention level.

Given the expected large impact of the above recommendations, this implies an immediate need on the part of management to revisit the existing reinsurance arrangements. The recommendations also need to be weighed against commercial considerations and whether the treaty cover proposed by the Appointed Actuary is available at reasonable terms.

*SAMA expects management and the Board of Directors to deliberate upon the findings and recommendations of the Appointed Actuary thoroughly, set clear action points in response to those recommendations, including exploring alternative treaty terms with the existing as well as other reputable reinsurers, where appropriate.*

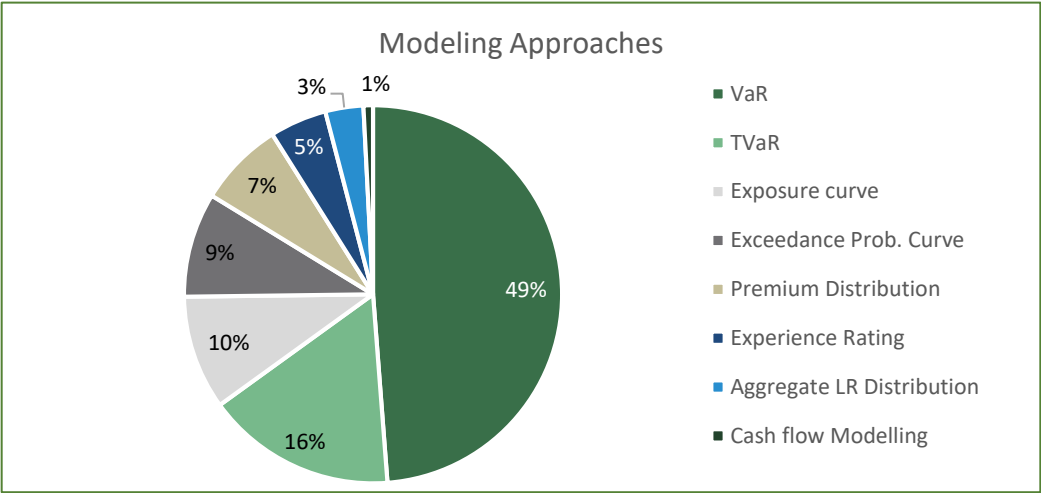
#### *Effectiveness of Reinsurance Procedures*

Another requirement under the Actuarial Work Rules is for the Appointed Actuary to review and comment on the effectiveness of the Company's procedures to assess whether (or not) any reinsurance contracts transfer significant insurance risk to its reinsurers.



It can be seen above that, based on the review performed by the appointed actuaries, nearly one-fifth of all insurance companies were deemed to have ineffective procedures in place for performing the required assessment, thus limiting those insurance companies' ability to identify and address any shortcomings in the existing reinsurance arrangements on a timely basis.

*Distribution of Modelling Approaches*



Value-at-Risk and Tail Value-at-Risk, two standard approaches in the actuarial risk modelling, were used by the majority of insurance companies. Some explored beyond the standard and used Exposure curves and Exceedance Probability Curves. On the other hand, a few insurance companies have used methods (e.g., experience rating, premium distribution, etc.), which may not be commensurate with the sophisticated modelling requirements of the task.

Overall, a promising start has been made for regular technical evaluation of reinsurance treaty arrangements of insurance companies in the Kingdom.

*SAMA expects the quality and sophistication of actuarial analysis performed by the Appointed Actuary to improve in the coming years, so that the reliability of actuarial recommendations to management is further enhanced. SAMA also expects that coordination between the Appointed Actuary and Reinsurance function of the Company will improve going forward so that any actuarial recommendations have due regard for commercial considerations.*

**C. Solvency & Capital Report 2020**

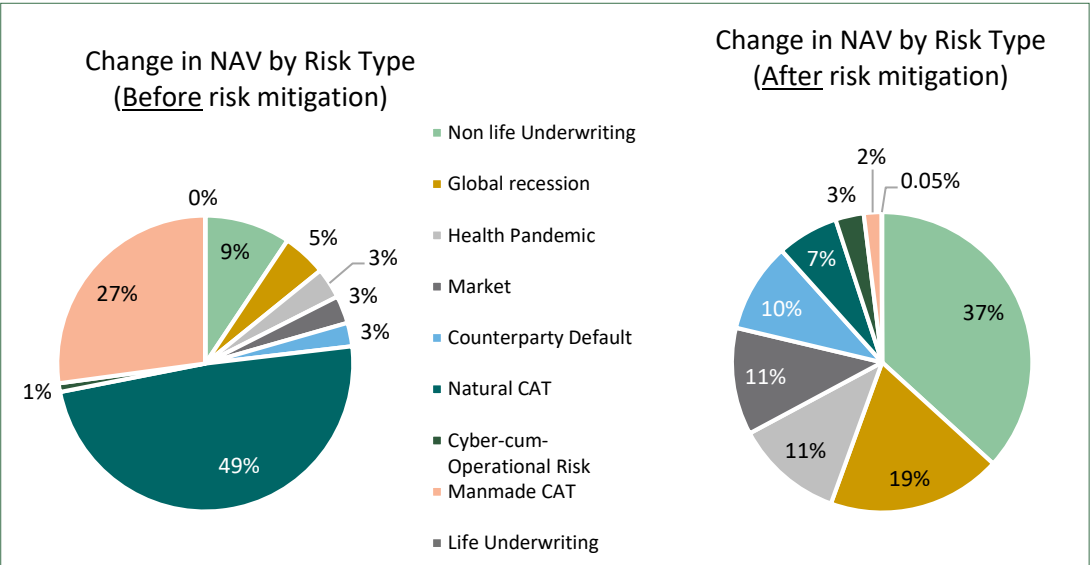
The Actuarial Work Rules introduced a requirement for the Appointed Actuary to investigate and advise the Company on its solvency position and identify all major risks the Company is exposed to using a range of actuarial techniques. In order to facilitate the Appointed Actuary in meeting this requirement, SAMA introduced a Stress and Scenario Test framework in 2020. Under the framework, the Appointed Actuary was required to assess the resilience of the Company's financial position if faced with a range of well-defined stress tests and adverse scenarios.

The impact of each stress test/scenario on the Company’s net asset value (NAV = total admissible assets – total liabilities) and solvency ratio was quantified, both before and after the impact of reinsurance and other risk mitigation measures (if any). The reports were submitted to SAMA in Q4 2020.

Subject to the parameters used in the above framework, the results of the above exercise enable each insurance company to identify its largest risk exposures, and evaluate the effectiveness of its risk mitigation strategies in the face of stressed business environment. The study also provides useful insights to SAMA as regards the vulnerabilities of insurance companies to various risks.

*Overall Results by Risk Type*

The graph below shows the proportion of each risk (in terms of the change in NAV) in the overall impact of the selected stresses and scenarios on the insurance sector, both before and after the impact of reinsurance recoveries and other risk mitigation measures (if any).



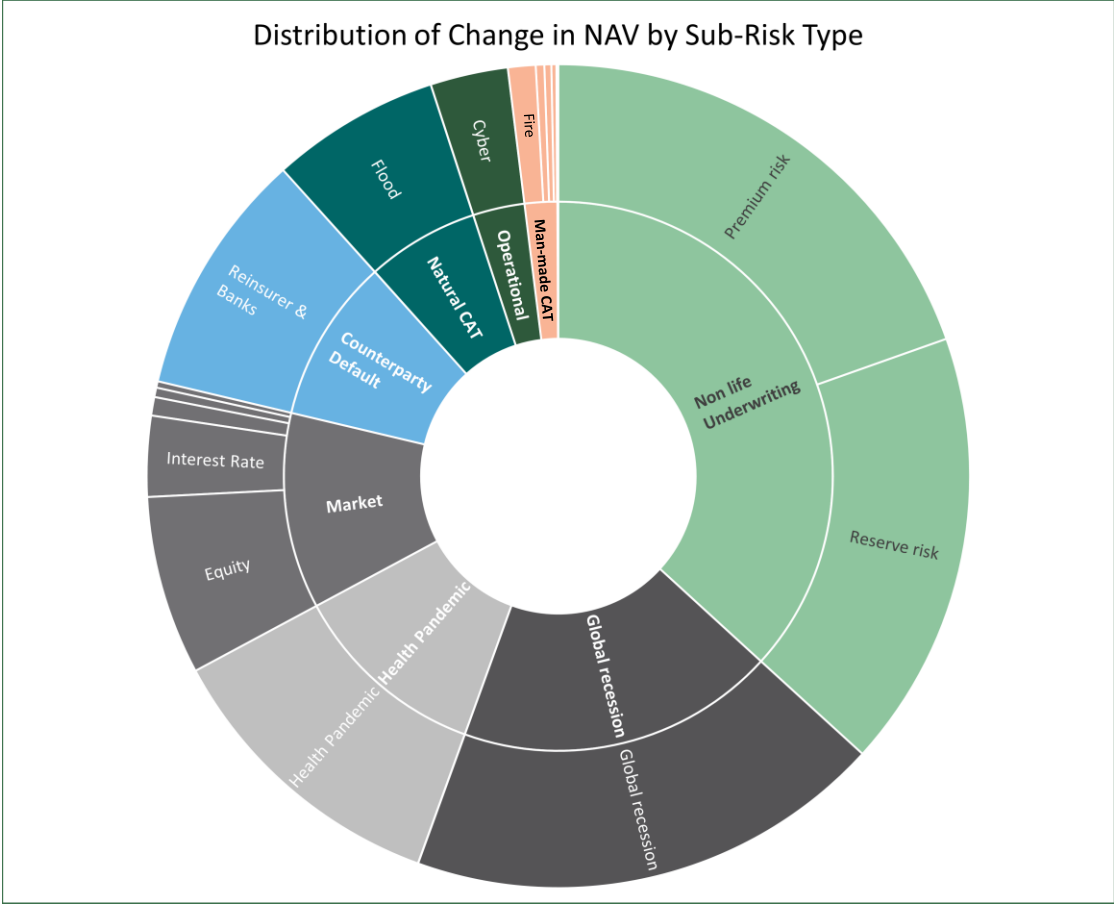
Before allowing for reinsurance recoveries, natural catastrophe (i.e., flooding due to cloudburst over Jeddah city affecting property and motor) has the biggest potential impact on the solvency position of the insurance sector, followed by man-made catastrophes, which involve major incidents affecting property, energy, marine, motor and aviation classes.

The picture changes radically after taking into consideration the amount of reinsurance recoveries anticipated in those adverse scenarios, and both natural catastrophe and man-made catastrophes form only a small proportion of the overall impact on net asset values. After the allowance for risk mitigation, non-life underwriting risk (i.e., pricing inaccuracy and reserve shortfall) has the biggest potential impact, followed by the global recession scenario - a blend of low oil prices, reduced economic activity, project cancellations, mass exodus of expatriates, scarce liquidity, high claims incidence and increase in frauds.

The large impact of reinsurance recoveries in the above scenarios shows that there is high dependence of insurance companies on their reinsurers in stressed situations and, hence, it is critical to have in place an optimal reinsurance arrangement appropriately aligned with the risk appetite of the Company.

*Overall Results by Sub-Risk Type (after risk mitigation)*

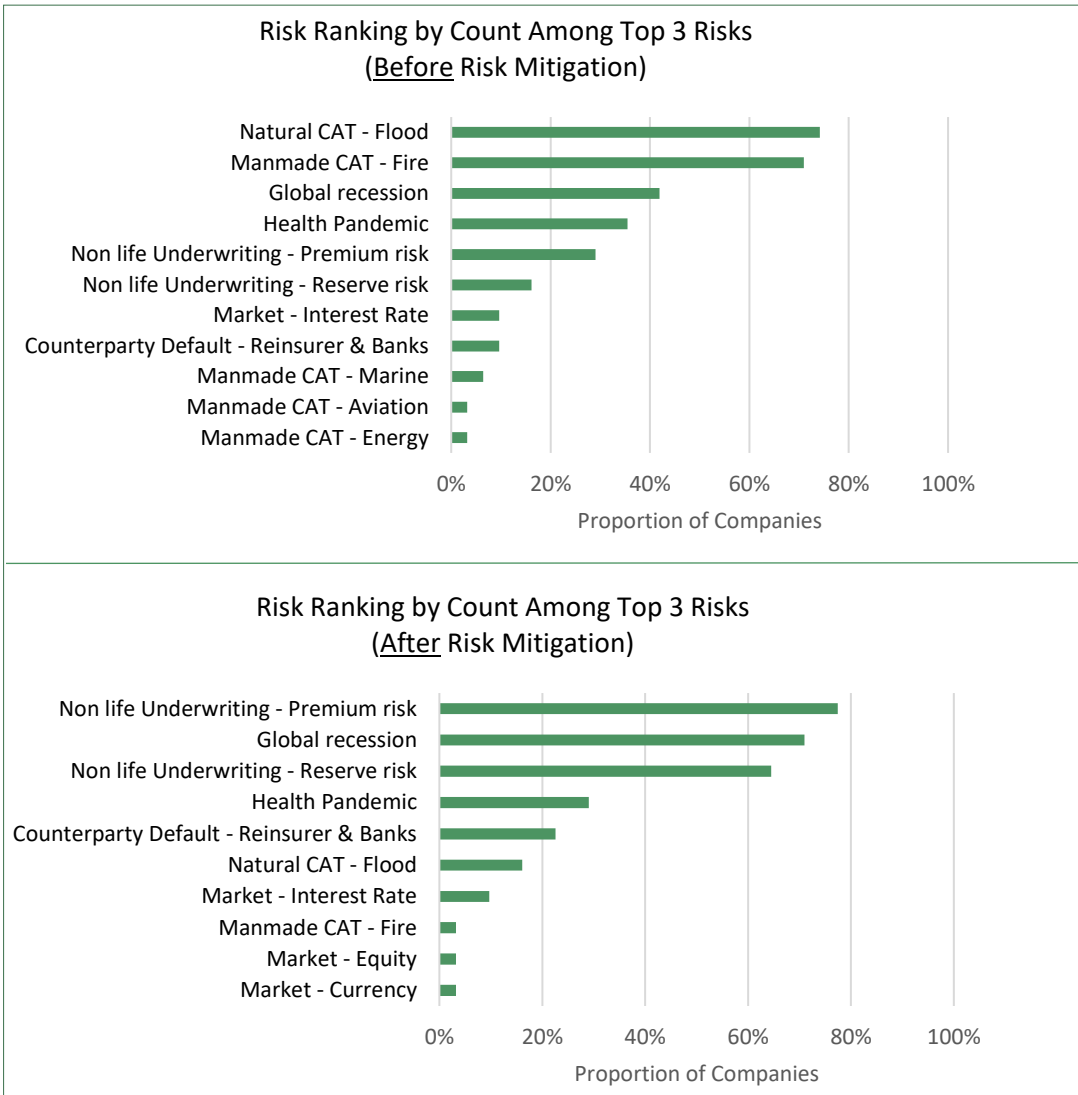
The graph below shows the distribution of the total change in NAV by risk area and by sub-risks within each risk area.



It can be observed that pricing and reserving risks have nearly equal shares in the total Non-life Underwriting risk, highlighting the importance of pricing and reserving accurately, supported by reliable and adequate data, and of effective governance around these two critical processes. Under Market risk, equity investments are the ones most exposed to risk. The impact of Operational risk, defined for the purpose of the framework as a cyber-attack on the Company’s systems, is a relatively new risk area and highlights the importance of paying due attention to this area given the increasing dependence on the online channels for sales, communication and remote office-working.

*Top Risk Ranking by Individual Insurance Companies*

The graphs in the previous sections depict the solvency impact of each risk on the insurance sector in aggregate. The two graphs below, on the other hand, show the status of each risk for individual companies and state the frequency with which that risk appears in the list of top three risks for individual insurance companies. The ranking is shown both before and after risk mitigation.



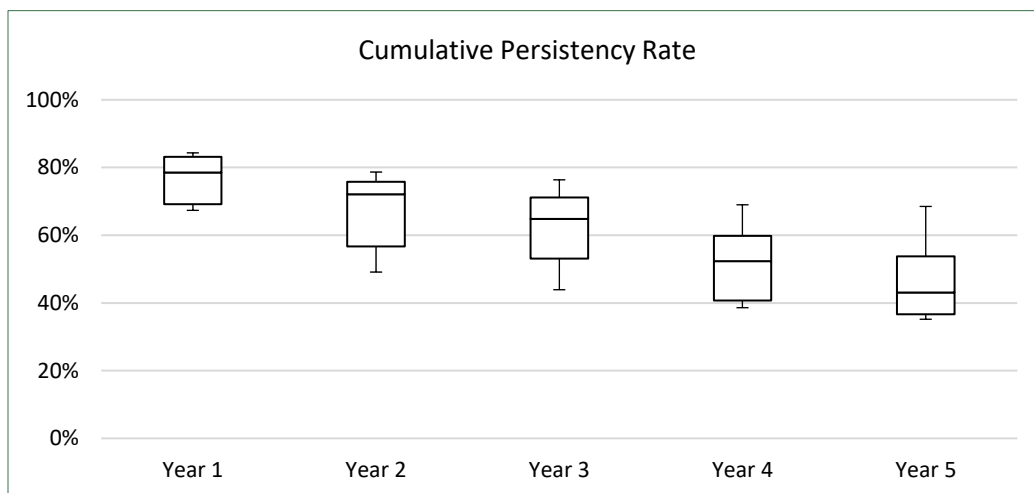
Before making allowance for the reinsurance and other risk mitigation measures, Flood risk appears most frequently among the top three risk of individual insurance companies, followed by the Fire risk at the single largest property insured by each insurance company (and where applicable, deaths and medical expenditure due to that fire).

After making allowance for the reinsurance and other risk mitigation measures, increase in the loss ratio (i.e., premium risk) for Non-life business ranks most frequently among the top three risks identified by insurance companies, followed by global recession and Non-life reserve risks. The Counterparty Default risk, due to exposure to the reinsurers and banks, jumps from the eighth position before risk mitigation to the fifth position after risk mitigation, mainly due to the limited risk mitigation measures available, thus highlighting the importance of dealing with reputable reinsurers and banks.

*SAMA expects management to carefully consider the results of the above exercise for shaping its business strategy and risk mitigation arrangements. SAMA also expects management will analyze the capital resources currently available against those indicated by the above exercise, and discussions will be held to identify options for meeting any potential shortfalls if the need so arises in the future.*

#### D. Persistency Report 2020 for Protection & Savings Insurance

The Actuarial Work Rules require an Appointed Actuary to analyze and report on the persistency rates of all long-term Protection and Savings products. Based on the reports submitted, the graph below shows the average persistency of at each policy duration, together with the interquartile ranges and minimum/maximum ratios, for the first five years after policy issue.



It can be observed that the average customer retention remains very low. By the end of the first year, already more than one fifth of all policies lapse on average, whereas, more than half of the total policies issued lapse by the end of the fifth year.

*SAMA expects that management will invest in training of its marketing staff and in improving the value of its product offerings in order to improve the extent of customer satisfaction with those products and, in turn, the persistency ratios in the market.*

#### E. Investment and Asset Liability Management Report 2020

The Actuarial Work Rules require each Appointed Actuary to perform an annual assessment of the suitability of an insurance company's investment policy and asset-liability management strategy. Below are the key recommendations made by the appointed actuaries in the relevant report for year 2020.

- Improve the Investment Policy to demonstrate that the target investment allocation is aligned with the risk appetite of the Company
- Risk appetite statements need to be improved, e.g., by specifying the tolerance for duration mismatch, minimum scenarios against which matching assets and subsequent excess assets are determined, etc.
- Improve the diversification of investments by exploring other asset categories permissible within SAMA investment rules
- Consider replacing low yielding bank deposits with relatively long-term investments in line with liability durations, also benefitting in turn from improved asset-liability duration matching
- Investment strategy should have due consideration for the liquidity needs arising from claims liabilities
- Improve the documentation of the Investment Policy, e.g., with respect to risk identification and assessment, performance measure standards and benchmarks, stress testing, etc.

- Cautiously monitor the impact of COVID-19 on the available investment options and changes in risks associated with each option

*SAMA expects management to discuss the Appointed Actuary's recommendations with the Board of Directors and Investment Committee of the Company, and make improvements, as deemed appropriate, in relevant areas.*

Copy to:

- All appointed actuaries